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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,254	02/10/2005	Hisashi Yonekawa	05025/LH	9881

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EXAMINER

ROSENBERGER, FREDERICK F

ART UNIT	PAPER NUMBER
2884	

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/524,254

Applicant(s)

YONEKAWA, HISASHI

Examiner

Frederick F. Rosenberger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/10/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Submissions

1. Applicant's preliminary amendment, filed 10 February 2005, has been received and entered. Accordingly, changes have been made to the specification and abstract. Claims 1-22 have been cancelled. Claims 23-28 have been added. Thus, claims 23-28 are currently pending in this application.

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d) from the International Bureau for PCT/JP03/10300, which papers have been placed of record in the file.

3. The International Search Report, dated 27 January 2004, and the translated International Preliminary Report on Patentability, dated 28 October 2004, for said application has also been received and considered.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claims 23-28 are objected to because of the following informalities:

In claim 23, lines 29-30, the recitation of a "peeling off section to peel off the back member... against the holding section" is confusing and unclear. Specifically, it is unclear how one would peel off one component against another component. Based on the disclosure in the specification, the above phrase has been interpreted such that the back member and the recording medium are peeled off from the holding section.

In claim 24, lines 2-4, the recitation of "detects the misholding of at least one of the back member and the recording medium toward the scanning section" is confusing and unclear. Specifically, it is unclear how one would detect misholding toward a scanning section. Based on the disclosure in the specification, the above phrase has been interpreted such that the misholding is detected with respect to the scanning section.

In claim 27, lines 2-4, the recitation of "detects the misholding of at least one of the back member and the recording medium toward a direction of gravitational force" is confusing and unclear. Specifically, it is unclear how one would detect misholding toward a direction. Rather, the above phrase has been interpreted such that the misholding is detected in the direction of a gravitational force.

The balance of the claims is objected to by virtue of their dependency on objected claim 23.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 23, 24, and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonekawa (US Patent # 6,781,144, also published on 23 May 2002 as US Patent Application Publication # 2002/0060303) in view of Watanabe (US Patent # 4,733,307).

With regards to claim 23, Yonekawa discloses a radiographic image reading system including a cassette **1** (Figure 1) to record radiographic information of an object to be radiographed and an apparatus **2** (Figure 6) to read out the radiographic image information, wherein:

The cassette **1** comprises:

A sheet-shaped recording medium **28** (Figure 1) having a front member **10** through which the recording medium **28** receives the radiographic image information of the object, and back member **20** positioned opposite to the front member, wherein the front **10** and back **20** members are relatively attached to each other so as to form an accommodation space in which the sheet-shaped recording medium **28** is accommodated (Figure 2) or detached from each other to open the recording medium (Figure 1); and,

The apparatus **2** to read out the radiographic image information comprises:

An insertion section **3** (Figure 6) to insert the cassette into the apparatus **2**;

A conveying section **40** to convey the cassette within the apparatus **2**;

A separation section, in the form of the engagement of lock pin **402c** (Figure 7), which unlocks the cassette **1** and enables the front member **10** to be separated from the back member **20** (column 37, lines 1-10 and 41-56);

A holding section **54** (Figure 9) to hold the back member **20** and the recording medium **28** for reading out the radiographic image information,

A scanning section **60** (Figure 6) to read out the radiographic image information from the recording medium **28** by relative movement between the recording medium **28** and the scanning section **60** (column 38, lines 1-8); and,

A peeling off section and combination section, wherein the conveyance mechanism **40** recombines the front **10** and back **20** members and the lock pin **402c** is disengaged thereby enabling the members to be locked together such that when conveyance mechanism **40** proceeds in the direction of **A6** the cassette **1** is peeled off from the magnetic holding member **54** (column 39, line 66 – column 40, line 24);

It is noted that Yonekawa also does not explicitly disclose a control section. However, the provision of a control section for controlling the apparatus would be inherent based on the disclosure of Yonekawa. For example, Yonekawa discloses that the processing of a cassette is started again automatically after some action by the user (column 42, lines 1-6). Further, Yonekawa denotes various responses of the apparatus to detected system errors (for example, column 34, line 55 – column 35, line 8; column 41, lines 33-67), which would necessitate a control section to affect the response of the apparatus.

It is noted that Yonekawa does not explicitly disclose a detection section or that the control section controls the apparatus according to the detection section to prevent damage. However, Yonekawa discloses that troubles caused by conveyance issues, improper transfers to the holding member and the scanning section, or improper assembly/disassembly of the cassette 1 are detected and communicated to the user. Such issues prevent the further operation of the apparatus (column 42, lines 6-20). The improper transfer or improper assembly/disassembly would be a case of misholding to be detected. Yonekawa further recognize that precise positioning of the panel is necessary for proper reading of the storage information (column 35, lines 41-59). Yonekawa does not disclose the specific detection section that would accomplish the detection of misholding.

However, such detection systems are well known in the art. For example, Watanabe teaches a mechanism for determining the location of a storage phosphor panel moving along a conveyance means in the scanning section of a read-out

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apparatus. The sensor **39'** (Figure 12e), in the form of a photo-interrupter or physically contacting limit switch, enable detection of the position of the panel **5** (column 23, lines 51-59). Such detection not only enables determination of the timing of read-out processes, but also provides a measure of the propriety of the location of the panel.

Thus, one of ordinary skill in the art at the time the invention was made would have been motivated to provide a detection section, as taught by Watanabe, to detect misholding of the back member by the holding section in the apparatus of Yonekawa, so as to accomplish the goals of precise positioning and avoidance of damage.

With regards to claim 24, Yonekawa teaches that errors are monitored in regards to the back member **20** being transferred to the vertical scanning means (column 42, line 17).

With regards to claim 26, Yonekawa teaches that operations are discontinued in the course of reading out the cassette if errors are detected (column 42, line 11).

With regards to claim 27, Yonekawa teaches that errors are monitored in regards to the conveyance of the cassette **1** (column 42, lines 13-16). Yonekawa further illustrates that conveyance includes transfer of the cassette from the insertion section **3** to the conveyance mechanism **40** and transfer of the cassette from the conveyance mechanism to the ejection section **4**, which would involve monitoring of the errors in the direction of gravity.

With regards to claim 28, Yonekawa teaches that operations are discontinued if errors are detected (column 42, lines 6-20). This would be especially important with the

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apparatus and cassette disclosed by Yonekawa as the peeling off section necessitates successful combination of the front member and the back member.

8. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yonekawa and Watanabe as applied to claim 24 above, and further in view of Brocklehurst (US Patent # 5,816,177).

The combination of Yonekawa and Watanabe disclose all the limitations of parent claim 24, as addressed above. However, the combination is silent with regards to the detection section detecting the misholding by virtue of the inclination of a tracing rod tracing the back member during motion. Instead, Watanabe provides for a light based switch or a limit switch, which is a contact based switch. Neither reference provides an explicit disclosure of a tracing rod.

Brocklehurst teaches a method for monitoring a sheet material conveyed through an apparatus. Although Brocklehurst relates to monitoring a sheet for cutting cloth material, Brocklehurst is related to a common problem disclosed in Yonekawa – namely, the monitoring of the surface of a sheet material to determine location and alignment of the sheet and therefore determine appropriate action by an apparatus. In this case, Brocklehurst discloses a tracing rod **59** (Figures 6-8), which traces the surface of the sheet material **11** by shoe **56** progressing in a direction **23** by conveyance means (column 6, lines 45-65). The inclination of the rod **59** is monitored by a detector **61** to determine location of the surface of the material. Further, the use of two of the

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sensors **51**, **52** enables detection of misalignment of the proceeding sheet (column 10, lines 38-50).

The system proposed by Brocklehurst would enable detection in changes to the surface of the back member/recording medium combination resulting in a case of misholding, such as if the front member had not been removed or the back member was misaligned. Thus, it would have been obvious for a person having ordinary skill in the art at the time the invention was made to modify the combination of Yonekawa and Watanabe, to provide the detection section with a tracing rod, as taught by Brocklehurst, for tracing the back member during relative movement, so as to accurately determine misalignment and changes in surface topology which would indicate a case of misholding, thereby preventing improper device read out or system damage.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The family of patents by Yonekawa (US Patents 6818905, 6949759, 6972726, 7045806, and 7112807) disclose similar information to the present patent application, but fail to qualify as prior art under 35 USC 102.

Robbins et al. (US Patent # 3,211,895) teach a sensing mechanism used in the conveyance of a sheet medium in an apparatus, which employs tilting rod members for the indication of the presence of a sheet at specific locations within the medium for subsequent control of the apparatus.

Hoitz (US Patent # 6,278,126) teaches a storage phosphor cassette reading apparatus, which employs optical sensors to track the location of a cassette in the scanning section of the apparatus for determining if the cassette is properly conveyed to the scanning section.

Watanabe (US Patent # 4,760,259) teaches the use of sensors throughout the conveyance path of a storage phosphor panel in a reading apparatus in order to monitor the position of the panel before each processing stage.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick F. Rosenberger whose telephone number is 571-272-6107. The examiner can normally be reached on Monday-Friday 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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